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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MAURO JR, THOMAS J	

ART UNIT	PAPER NUMBER
2143	4

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/628,532	DORBOLO, RICCARDO G.	
	Examiner	Art Unit	
	Thomas J. Mauro Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-30* is/are pending in the application.

4a) Of the above claim(s) *1-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 and 3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-30 are presented for examination.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-12, drawn to count values for redirection and execution of instructions, classified in class 709, subclass 242.

Group II. Claims 13-30, drawn to fault redirection of line cards, classified in class 709, subclass 239.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as providing instructions to the synchronous switch by generating count values **(Page 5 Lines 10-13)**. In the instant case, invention II has separate utility such as reprogramming instructions for a switch with a routing parameter set for a failed line card to a protect line card **(Page 4 Lines 10-17)**. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Terry J. Stalford (#39522) on September 12, 2003 a provisional election was made without traverse to prosecute the invention of Group II, claims 13-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

7. Claim 15 objected to because of the following informalities:

As to claim 15,

- On line 21, "second routing set" should read -- second routing parameter set -- to be consistent with the specification and other areas within the claim(s).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The phrase "a routing parameter set" is indefinite because there are both "a first routing parameter set" and "a second routing parameter set". Please clarify

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 13-15,19-22 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,389,024 to Ghai et al. (hereinafter Ghai) in view of U.S. Patent No. 6,256,293 to Gerstel et al. (hereinafter Gerstel).

Regarding claim 13, Ghai teaches the invention substantially as claimed, a method for associating routing parameters for a switch with line cards serviced by the switch comprising: programming a redirection memory to associate a routing parameter set in a routing memory for

a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card **(Ghai -- Figure 2, Col. 3 lines 57-67 and Col. 4 lines 1-20 – A routing table, containing routing parameters, is stored within memory which handles service requests for the line cards, i.e. first line card)**; and reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card **(Ghai -- Abstract, Figure 2, Col. 3 lines 63-67 and Col. 4 lines 1-20 – Because the routing table provides flexibility in routing functions, this implicitly teaches that it can be reprogrammed to adapt under certain conditions, just as it was programmed and stored in memory originally)**. Ghai fails to teach in response to an event initiating activation of a second line card in place of the first line card.
Gerstel, however, teaches an event initiating activation of a second line card in place of the first line card **(Gerstel -- Col. 2 lines 53-54 – Event is a failed line card)**.
Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an event initiating activation of a spare, i.e. second, line card into the invention of Ghai as taught by Gerstel in order to provide a more fault-tolerant system to limit downtime.

Regarding claim 14, Ghai in view of Gerstel teaches the invention substantially as claimed, wherein the event is a failure of the first line card **(Gerstel -- Col. 2 lines 53-61)**.

Regarding claim 15, Ghai teaches the invention substantially as claimed, further comprising: programming the redirection memory to associate a second routing set in the

routing memory with the second line card, the second routing parameter set including a plurality of routing parameters to be provided to the switch to service the second line card **(Ghai -- Figure 2, Col. 3 lines 57-67 and Col. 4 lines 1-20 – A routing table, containing routing parameters, is stored within memory which handles service requests for the line cards, i.e. second line card)**; and reprogramming the redirection memory to associate the second routing parameter set with the first line card **(Ghai -- Abstract, Figure 2, Col. 3 lines 63-67 and Col. 4 lines 1-20 – Because the routing table provides flexibility in routing functions, this implicitly teaches that it can be reprogrammed to adapt under certain conditions, just as it was programmed and stored in memory originally)**. Ghai fails to teach in response to an event initiating activation of a second line card in place of the first line card.

Gerstel, however, teaches an event initiating activation of a second line card in place of the first line card **(Gerstel -- Col. 2 lines 53-54 – Event is a failed line card)**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an event initiating activation of a spare, i.e. second, line card into the invention of Ghai as taught by Gerstel in order to provide a more fault-tolerant system to limit downtime.

Regarding claim 19, Ghai teaches the invention substantially as claimed, wherein the redirection memory comprises a programmable table storing associations between line cards serviced by the switch and the routing parameter sets in the routing memory for the switch **(Ghai -- Figure 2, Col. 3 lines 63-67 and Col. 4 lines 1-20 – In memory is stored a routing table**

which provides the necessary routing information and instructions to handle incoming data and requests).

Regarding claim 20, Ghai teaches the invention substantially as claimed, the system comprising: a computer-readable medium; and software stored on the computer-readable medium **(Ghai -- Col. 3 lines 45-50 – In order for the host computer to run the software used to monitor and control the system, the code for the software must be stored on a computer-readable medium. Therefore, the reference implicitly teaches the above computer-readable medium limitation).** The remaining limitations in the claim are similar to the limitations of claim 13 rejected above. Therefore, they are rejected under the same rationale.

Regarding claims 21 and 22, they are system claims corresponding to the method claimed in claims 14 and 15. They have similar limitations; therefore, claims 21 and 22 are rejected under the same rationale.

Regarding claim 28-30, they are system claims corresponding to the method claimed in claims 13-15. They have similar limitations; therefore, claims 28-30 are rejected under the same rationale.

12. Claims 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghai in view of Gerstel as applied to claims 13-15 and 20-22 above, and further in view of U.S. Patent No. 5,598,409 to Madonna et al. (hereinafter Madonna).

Regarding claim 16, Ghai does not explicitly teach the invention as claimed. Madonna, however, teaches the invention substantially as claimed, wherein the routing parameters comprise instructions **(Madonna -- Col. 6 lines 10-12)**, the routing parameter set comprises an instruction set **(Madonna Col. 6 lines 10-11 – Set is just a grouping of instructions, i.e. instructions as to how to control a port)** and the routing memory comprises an instruction memory **(Madonna -- Col. 6 line 12)**.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the instructions, instruction sets and instruction memory as taught by Madonna into the invention of Ghai in order to provide code or instructions to the switch for carrying out the necessary functions.

Regarding claim 23, this is a system claim corresponding to the method claimed in claim 16. They have similar limitations; therefore, claim 23 is rejected under the same rationale.

13. Claims 17-18 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghai in view of Gerstel and Madonna as applied to claims 13-16 and 20-23 above, and further in view of Applicants Admitted Prior Art (AAPA) Application No. 09/452,751.

Regarding claim 17, Ghai does not explicitly teach the invention as claimed. However, AAPA teaches a synchronous switch **(AAPA -- Page 3 line 2 – Synchronous Switch)**.
It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate and use the synchronous switch as taught by AAPA in the invention of Ghai in order to allow regular switching of data to occur, while at the same time, gaining fault-tolerance in the event of a line card failure.

Regarding claim 18, Ghai does not explicitly teach the invention as claimed. However, Madonna teaches the invention substantially as claimed, wherein the synchronous switch is a time slot interchanger (TSI) **(Madonna -- Col. 5 line 1 and Col. 7 line 6)**.
It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the time slot interchanger as the synchronous switch as taught by Madonna into the invention of Ghai in order to provide synchronous non-clocking switching of data packets in a fast and reliable manner.

Regarding claims 24 and 25, these are system claims corresponding to the method claimed in claims 17 and 18. They have similar limitations; therefore, claims 24 and 25 are rejected under the same rationale.

Regarding claim 26, Ghai in view of Madonna and AAPA teach the invention substantially as claimed, a synchronous switch for a telecommunications node, comprising: a

time slot interchanger (TSI) operable to switch traffic between time slots **(Madonna -- Col. 5 line 1 and Col. 7 line 6)** for a plurality of line cards **(Ghai -- Col. 3 lines 57-58)**; an instruction memory for the TSI, the instruction memory comprising a plurality of instruction sets **(Madonna -- Col. 6 lines 10-11 – Set is just a grouping of instructions, i.e. instructions as to how to control a port)**, each instruction set including a plurality of instructions operable to be provided to the TSI to switch time slots of an associated line card **(Madonna -- Col. 6 lines 10-12)**; a redirection memory operable to selectively associate each instruction set of the instruction memory with a disparate one of the line cards **(Madonna -- Col. 6 line 12)**; and a controller operable to reprogram the redirection memory to change associations of the instruction sets with the line cards **(Ghai -- Col. 3 lines 45-50 – A host computer which controls and monitors the switching functions)**.

Regarding claim 27, the switch further comprising: the redirection memory programmed to associate a first instruction set with a working line card **(Ghai -- Figure 2, Col. 3 lines 57-67 and Col. 4 lines 1-20 – A routing table, containing routing parameters, is stored within memory which handles service requests for the line cards, i.e. first line card)** and a second instruction set with a protect line card **(Ghai -- Figure 2, Col. 3 lines 57-67 and Col. 4 lines 1-20 – A routing table, containing routing parameters, is stored within memory which handles service requests for the line cards, i.e. second line or protect card)**; and the controller operable to reprogram the redirection memory to associate the first instruction set with the protect line card and the second instruction set with the working line card **(Ghai -- Abstract, Figure 2, Col. 3 lines 63-67 and Col. 4 lines 1-20 – Because the routing table provides**

flexibility in routing functions, this implicitly teaches that it can be reprogrammed to adapt under certain conditions, just as it was programmed and stored in memory originally) in response to failure of the first line card and activation of the second line card in place of the first line card **(Gerstel -- Col. 2 lines 53-54 – Event is a failed line card)**.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,167,025 to Hsing et al. teaches methods and apparatus for detecting faults and restoring connections in networks by using rerouting routines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Thomas J. Mauro Jr.
Examiner
Art Unit 2143

TJM
September 16, 2003

DAVID WILEY
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